Surface Temperature Protocol
Field Guide

Task

Measure surface temperature.

What You Need

- ❑ *Surface Temperature Data Sheet*
- ❑ Hand-held Infrared Thermometer (IRT)
- ❑ Ruler or Meter Stick, (if snow cover is present)
- ❑ Pencil or pen
- ❑ Accurate Watch

In The Field

1. Complete the top of your *Surface Temperature Data Sheet* (fill out the *Supplemental Site Definition Data* section if you are taking Surface Temperature Measurements at a particular site for the first time, or if one of the values in that section has changed)
2. Take cloud observations following GLOBE *Cloud Protocols*.
3. If there is no snow on the ground anywhere in your Site, then check either "Wet" or "Dry" for the Site's *Overall Surface Condition* field on your *Surface Temperature Data Sheet*.
4. Pick nine Observation Spots that are in open areas within your site and are at least five meters apart. The Spots should also be away from trees and buildings that create a shadow on the land and in locations that have not been recently disturbed by people or animal traffic. (**Note** It is best if you can take readings at the nine individual Observation Spots within seconds of each other.)
5. Go to one of the nine Observation Spots and stand so that you do not cast a shadow on the Spot.
6. Record the Current Time in Universal Time (UT) on your *Surface Temperature Data Sheet*.
7. Hold the infrared thermometer (IRT) with your arm extended straight out and point the instrument straight down at the ground.
8. Hold the IRT as still as possible. Press and release the recording button. [You MUST release the recording button in order for the instrument to register and hold your spot's temperature.]
9. Read and record the temperature (in Celsius) from the digital display panel on the back of the IRT.
10. Measure and record the snow depth at the Observation Spot.
11. Repeat steps 5-10 at each of the remaining eight Observation Spots.
12. Record any other information that explains the environmental conditions of the day or site in the *Comments* field.